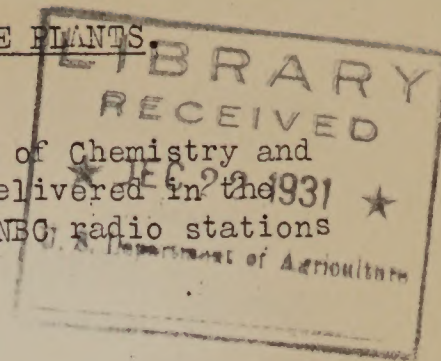


## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.







A radio discussion by Mr. Bailey E. Brown of the Bureau of Chemistry and Soils, and Mr. W.R. Beattie of the Bureau of Plant Industry, delivered in the National Farm and Home Hour through a network of 45 associate NBC radio stations Thursday, December 10, 1931.

\* \* \* \* \*

MR. BEATTIE:

Mr. Brown: We are getting a lot of inquiries from people who are having troubles with their house plants. What do you consider the main difficulties that most people encounter in keeping living plants in the home?

MR. BROWN:

Well, Mr. Beattie, we have our home pretty well filled with plants most of the time and so I have a good chance to study the problem. Success with plants kept in the house during the part of the year when artificial heat is used depends largely upon five things, namely, temperature, water supply, light, soil, and plant food.

MR. BEATTIE:

Temperature, water supply, light, soil and plant food. I think I would add insect troubles and the effect of poisonous gases and dust in the atmosphere.

MR. BROWN:

That's true, but I find that a great deal of the trouble experienced with potted plants kept in the house is due to excessive heat or cold. High temperatures cause the plants to lose too much water by evaporation through their leaves and also forces them into a tender and unnatural growth. At night the temperature frequently drops to a point that causes a general setback and weakening of the plant to a point where it is more susceptible to the ravages of insects and diseases.

MR. BEATTIE:

That and improper watering. I think many of us get a little careless about watering our plants, I know I do, and if the Mrs. goes away for a few days I am pretty sure to forget to water the plants.

MR. BROWN:

Yes, careful and regular watering is very important in the care of house plants, especially during the time of the year when the house is heated and the indoor air is likely to be drier than that on the outside.

MR. BEATTIE:

I find it a good idea to provide some method of increasing the humidity or moisture content of the air, not only for the plants but primarily for the benefit of the people living in the house.

MR. BROWN:

Yes, and one should remember that plants in small pots require watering oftener than those in large pots or in boxes. By examining the surface of the soil you can tell if water is needed. In watering your house plants be sure that enough water is applied to completely wet the soil, or until a little water comes through the drainage hole in the bottom of the pot. Here is a good plan - get the containers in pans of water and allow them to remain until the moisture reaches the surface of the soil, then remove them from the water and let the surplus



water drain off. No further watering will be required until the surface of the soil again dries out.

MR. BEATTIE:

I consider sunlight one of the most important factors in the care of house plants.

MR. BROWN:

That's true. All plants require more or less light, but some plants require more light than others. Certain of the ferns, palms, and a number of the climbers do not need as much light as roses, geraniums and begonias. The afternoon sunshine seems to be too intense for all houseplants and so if the plants are kept in a west window some form of shading to reduce the amount of afternoon sunlight and heat may be necessary.

MR. BEATTIE:

I suspect that the heat of the sun may have more to do with it than the actual light. But you said something in the beginning about soils and fertilizers for house plants, Mr. Brown. How about their importance?

MR. BROWN:

Yes, I believe I promised to say something about soils and fertilizers. You know that the soil is the home of the plant. It is in the soil that the roots develop and a healthy growth depends very largely upon good roots, in fact without good soil it is practically impossible to grow good houseplants.

MR. BEATTIE:

Just what do you mean by a good soil for houseplants?

MR. BROWN:

Well, to begin with the soil should possess good mechanical qualities, it should be fertile and contain plenty of plant food. A satisfactory soil for most house plants can be made by mixing together one-third leaf mold or well-rotted compost, one-third good garden loam or well-composted sods from some pasture, and one-third clean, gritty sand. In case leaf mold or compost is not available thoroughly rotted barnlot manure may be used instead. The addition of the sand is to prevent the soil packing and to provide good drainage for most plants simply will not grow with wet feet. A water-logged soil means poor drainage, a condition which prevents a sufficient access of air to the soil and this leads to sourness and other conditions that are harmful to your plants.

MR. BEATTIE:

I've often watched old gardeners prepare potting soil. First they go to some pasture and cut a quantity of clean sod; then they pile this in an out-of-the-way corner of the garden with alternate layers of compost or dairy barn manure. They put down a layer of sods about 4 or 5 inches thick, then a layer of compost and so on until they have a pile perhaps 30 inches high. If the materials are dry, water is added as the pile is being made. After the pile has lain for a few weeks they turn it over and chop the materials all together and let it decay for several weeks longer adding water as needed. As a rule, they add sand, leaf mold, and perhaps bone meal when they come to use the soil, the amounts of each depending upon the kind of plants that the soil is to be used for.

MR. BROWN:

That is a good method. The main thing is to get the materials broken up into a fine condition and any stones or trash removed. It may sometimes be necessary to screen the soil through a rather coarse screen or sieve. The



addition of bone meal at the rate of about two large tablespoonsful to a bushel of prepared soil will be desirable.

MR. BEATTIE:

But suppose you have your plants potted in soil such as you have described and they have gone on growing for most of the winter then they begin to show indications of becoming a little hungry and in need of special feeding, but not repotting, what would you advise?

MR. BROWN:

Healthy, growing plants call for more feeding than plants not doing so well. Stimulants of all kinds should be used with care and only in small quantities at a time. More harm than good is often done by overfeeding house plants or by the application of soluble fertilizer when the plants are in an unhealthy condition or due for a period of resting.

MR. BEATTIE:

What do you consider a real good plant food material for stimulating the growth of pot-grown plants, Mr. Brown?

MR. BROWN:

Liquid manure - because it's safe to use. One pound of dairy barn manure soaked for 24 hours in 2 or 3 gallons of water will give a solution of about the proper strength. If you want to make a little more complete fertilizer add one-half ounce of a commercial fertilizer such as is used by truck growers to the 2 or 3 gallons of manure solution. Be careful that you do not use too much of the fertilizer.

MR. BEATTIE:

Suppose you could not get the dairy barn manure, what would you recommend as a substitute?

MR. BROWN:

Dried cattle or sheep manure which is sold by seed dealers, only do not use more than one-half as much of it. In case you do not care to use the manure then use commercial fertilizer.

MR. BEATTIE:

At what strength should the commercial fertilizer be used?

MR. BROWN:

Oh, I would say about an ounce of the truckers fertilizer to three or four gallons of water and it should be well stirred. Not all of the materials will dissolve so let them settle out and then pour off the clear liquid and use it for watering your plants. Another method is to use one-fourth ounce each of sodium nitrate, potassium chloride, and ammonium phosphate dissolved in one gallon of water. I will repeat this--one-fourth ounce of sodium nitrate, one-fourth ounce of potassium chloride, and one-fourth ounce of ammonium phosphate dissolved in one gallon of water. This is most too strong and should be kept as a stock solution and whenever you want to give your plants a little extra feeding just take about one-fourth pint of it and dilute to two quarts before you apply it to your plants.

MR. BEATTIE:

Mr. Brown, are there any special precautions that should be observed in applying these chemical solutions to the plants?



MR. BROWN:

Yes, there are. In the first place if the soil in the pots becomes dry it should be watered well before applying the chemical solution. Don't apply the solution too often, not oftener than every two or three weeks in the late winter and early spring when the plants are growing rapidly. Avoid pouring the solution on the foliage or directly around the stems of the plants. After all, it is important that you have good potting soil to begin with. Then use fertilizers where the plants are making a satisfactory growth and do not require repotting in larger pots. Repotting will often check blooming while the moderate application of stimulants will increase the production of bloom.